

CLAIMS

1. A fixing apparatus comprising a heating roller, a pressure roller that presses recording material to outer circumferential surface of the heating roller, a partial heating means that heats the heating roller, and a temperature detecting means that detects the temperature of the heating roller, in which the heating roller is heated by the partial heating means so that an image is fixed with heat on the recording material, which passes between the heating roller and the pressure roller, wherein the temperature detecting means is disposed in a region of the heating roller heated by the partial heating means.
2. The fixing apparatus according to claim 1, wherein the partial heating means is provided inside of the heating roller.

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3. The fixing apparatus according to claim 1, wherein the partial heating means is provided outside of the heating roller.
4. The fixing apparatus according to claim 3, wherein the partial heating means is a heat source with an electromagnetic induction heating system that causes the heating roller to generate heat by generating an eddy current in a heat generating layer of the heating roller in a magnetic field generated by a magnetic flux generating means, the magnetic flux generating means is disposed facing the outer peripheral surface of the heating roller with a constant gap formed relative to the outer peripheral surface of the heating roller, and the temperature detecting means is disposed in a region where the heating roller faces the magnetic flux generating means.
5. The fixing apparatus according to claim 4, wherein the temperature detecting means is disposed in a region where the maximum amount of heat

generation of the heat generating portion of the heating roller is not less than 1/e times.

6. The fixing apparatus according to claim 5, wherein the temperature 5 detecting means is disposed at the position where the amount of heat generation of the heat generating portion of the heating roller is maximum.

7. A fixing apparatus comprising a heating roller, a pressure roller that presses recording material to the outer circumferential surface of the heating 10 roller, and a partial heating means that heats the heating roller, in which the heating roller is heated by the partial heating means so that an image is fixed with heat on the recording material, which passes between the heating roller and the pressure roller, wherein when the fixing apparatus is in standby, heating of the heating roller is performed by the partial heating means with a 15 state which the heating roller is rotating.

8. The fixing apparatus according to claim 7, wherein the relationship between the rotation of the heating roller during standby and the rotation of the heating roller during fixing operation is (revolution velocity of the heating 20 roller during fixing operation) \geq (revolution velocity of the heating roller during standby).

9. The fixing apparatus according to claim 7, wherein the rotation of the heating roller during standby is intermittent rotation.

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10. The fixing apparatus according to claim 9, comprising a temperature detecting means that detects the temperature of the heating roller and a control means that controls intermittent rotation of the heating roller based on the detection value of the temperature detecting means, configured such 30 that the control means rotates the heating roller a predetermined angle at the

point in time that the detection value of the temperature detecting means has reached a set temperature that has been set in advance.

11. The fixing apparatus according to claim 10, wherein the rotation angle
5 of the heating roller when intermittently rotated is a rotation angle such that
at least the heated region of the heating roller, which is heated by the partial
heating means when the heating roller is in a stopped state, is positioned
outside of the region where the partial heating means is disposed.

10 12. The fixing apparatus according to claim 11, wherein the rotation angle
of the heating roller when intermittently rotated is a rotation angle such that
the heated region of the heating roller is positioned at a nip portion of the
heating roller and the pressure roller.

15 13. The fixing apparatus according to claim 7, wherein the rotation of the
heating roller during standby is steady state rotation.

14. The fixing apparatus according to claim 13, comprising a temperature
detecting means that detects the temperature of the heating roller, and a
20 control means that controls driving/stopping of the partial heating means
based on the detection value of this temperature detecting means.

15. The fixing apparatus according to claim 10 or 14, wherein the set
temperature used for the control during standby is a temperature at which it
25 is possible for the heating roller to reach the temperature at which fixing
operation is possible by the time that the recording material begins to enter
the fixing apparatus.

16. The fixing apparatus according to claim 10 or 14, wherein the partial
30 heating means is a heat source with an electromagnetic induction heating

system that causes the heating roller to generate heat by generating an eddy current in a heat generating layer of the heating roller in a magnetic field generated by a magnetic flux generating means, the magnetic flux generating means is disposed facing the outer peripheral surface of the heating roller 5 with a constant gap formed relative to the outer peripheral surface of the heating roller, and the temperature detecting means is disposed in a region where the heating roller surfaces the magnetic flux generating means.

17. The fixing apparatus according to claim 16, wherein the temperature 10 detecting means is disposed in a region where the maximum amount of heat generation of the heat generating portion of the heating roller is not less than 1/e times.

18. The fixing apparatus according to claim 17, wherein the temperature 15 detecting means is disposed at the position where the amount of heat generation of the heat generating portion of the heating roller is maximum

19. An image forming apparatus comprising the fixing apparatus 20 according to any of claims 1 to 18.